G-Stomper Studio
G-Stomper Rhythm
G-Stomper VA-Beast

User Manual

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Contents

20 MIDI 2

20.1 How to connect MIDI equipment to your Android device 2
20.1.1 Connect classic MIDI equipment to your device: 3

20.2 G-Stomper MIDI Overview 4
20.2.1 Full Roundtrip MIDI 4
20.2.2 Multiple Virtual MIDI Interface support 4
20.2.3 Transmitted MIDI messages 4
20.2.4 Latency Compensation 4
20.2.5 MIDI Learn 5
20.2.6 Available MIDI Channel Mappings 5

20.3 MIDI Setup 7
20.3.1 MIDI Device 8
20.3.2 Midi Transmission 8
20.3.3 Default IN/OUT Interfaces 9
20.3.4 Latency compensated MIDI Transmission 10
20.3.5 MIDI Velocity Handling for Drum Samplers 11
20.3.6 Global MIDI Mappings 12
20.3.7 Sampler MIDI Mappings 14
20.3.8 VA-Beast Synthesizer MIDI Mappings 14

20.4 Setup MIDI Channels/Interfaces 15
20.4.1 Manual Edit MIDI Channel/Interface 17
20.4.2 Learn MIDI Channel/Interface 18

20.5 Setup MIDI CC/Key Mappings 19
20.5.1 Manual Edit MIDI CC/Key Mapping 20
20.5.2 Learn MIDI CC/Key Mapping 21

20.6 Pure MIDI Instrument Tracks 22

20.7 MIDI CC & Key Mapping Charts 23
20.7.1 Global MIDI CC/NRPN Mapping Chart 23
20.7.2 Global MIDI Key Mapping Chart 28
20.7.3 Sampler MIDI CC Mapping Chart 34
20.7.4 VA-Beast MIDI CC Mapping Chart 37

20.8 MIDI Export 43
20.8.1 Export Pattern as MIDI 44

20 MIDI

MIDI (Musical Instrument Digital Interface) is a technical standard that describes a protocol, digital interface and connectors and allows a wide variety of electronic musical instruments, computers and other related devices to connect and communicate with one another.

Read more about MIDI on http://en.wikipedia.org/wiki/MIDI.

20.1 How to connect MIDI equipment to your Android device

Your Android device must run at least on Android 3.1 to use MIDI over USB. Recommended for best results (for lower latency and better stability) is Android 4.2 or later.

Your Android device must support USB host mode. Please check your device specifications before buying any MIDI hardware.

Successfully tested devices:
Google Galaxy Nexus
Samsung Galaxy Tab 10.1(v1)
Samsung Galaxy Tab 7.7 (P6800)
Google Nexus 7 (2013)
Google Nexus 9
Google Nexus 6
Samsung Galaxy S5
Sony Xperia Z3 (Android 5.x)

Depending on your device one of the following adapter cables is required:

- USB Female to Micro USB Male OTG Cable Adapter for devices with Micro USB connector
  http://www.amazon.com/gp/product/B0081CRXGI

- USB Female to 30 Pin USB Male OTG Cable Adapter for Samsung tablets with 30 Pin USB connector
  http://www.amazon.com/gp/product/B0096KJTU2

Most modern MIDI controllers/keyboards can be connected directly over USB using the USB adapter cables mentioned above.

Successfully tested Controllers:
Akai MPK225
Akai MPK25
Akai MPKmini MK2

Note:
A good practice is to use self-powered MIDI controllers (which can be used with an external power supply) or controllers with a special low-power mode (like the Akai MPK225) to minimize the battery strain on your Android device.

20.1.1 Connect classic MIDI equipment to your device:

To connect Non-USB MIDI hardware equipped with a classic 5 Pin DIN connector, an USB class-compliant MIDI Interface is required (e.g. ESI MIDIMate II).

http://www.esi-audio.com/products/midimate2/

20.2 G-Stomper MIDI Overview

20.2.1 Full Roundtrip MIDI

All G-Stomper apps, G-Stomper Studio, G-Stomper VA-Beast and G-Stomper Rhythm, come with full MIDI roundtrip integration, which lets you …

- … control G-Stomper with your MIDI controller
- … hook up MIDI capable Samplers and Synthesizers
- … send MIDI feedback to your MIDI feedback capable MIDI Controller, e.g. such with flashing Pads like the AKAI MPK225, with Motor Faders or with LED based Knobs or Faders
- … synchronize with external MIDI equipment (Master or Slave)

20.2.2 Multiple Virtual MIDI Interface support

Some class-compliant MIDI Interfaces/Controllers provide multiple Virtual MIDI Interfaces (to address more than 16 MIDI Channels). These Virtual MIDI Interfaces can be addressed in use of the IN/OUT Interface selectors. The number of available Virtual MIDI Interfaces depends on your MIDI hardware (check the Documentation of your MIDI Interface/Controller).

(see also Chapter: MIDI Setup / Default IN/OUT Interfaces)

20.2.3 Transmitted MIDI messages

- Note Messages: IN/OUT
- Control Changes: IN/OUT
- MIDI Clock: IN/OUT
- MIDI Start/Stop/Continue: IN/OUT
- Program Changes: IN/OUT

(see also Chapter: MIDI Setup / Midi Transmission)

20.2.4 Latency Compensation

G-Stomper provides Latency compensation for all sequence related MIDI transmissions.

(see also Chapter: MIDI Setup / Latency compensated MIDI Transmission)

20.2.5 MIDI Learn

G-Stomper provides full MIDI learn capability for …

- … MIDI Channels and Virtual Interfaces
- … MIDI CC Mappings
- … MIDI Key Mappings

(see also Chapters: Learn MIDI Channel/Interface, Learn MIDI CC/Key Mapping)

20.2.6 Available MIDI Channel Mappings

20.2.6.1 G-Stomper Studio

- 1 MIDI Channel for global controls with the option to play all Sampler Tracks at once in one single channel (each on a specific Key/Note)
- Up to 24 MIDI Channels for the Sampler Tracks
- 1 MIDI Channel for the selected Sampler Track
- Up to 12 MIDI Channels for the Synthesizer Tracks
- 1 MIDI Channel for the selected Synthesizer Track

Default setup:
The selected Synthesizer track listens to all channels on all virtual interfaces.
In other words, if you select Track VT[..] at runtime, then the MIDI events get passed to that particular Track (Synth instance).

Note: Mapping more than 16 Channels is only possible if your controller provides multiple Virtual MIDI Interfaces.

20.2.6.2 G-Stomper VA-Beast (standalone)

- 1 MIDI Channel for global controls
- Up to 12 MIDI Channels for the Synthesizer Tracks
- 1 MIDI Channel for the selected Synthesizer Track

Default setup:
The selected Synthesizer track listens to all channels on all virtual interfaces.
In other words, if you select Track VT[..] at runtime, then the MIDI events get passed to that particular Track (Synth instance).

Note: Mapping more than 16 Channels is only possible if your controller provides multiple Virtual MIDI Interfaces.

20.2.6.3 G-Stomper Rhythm

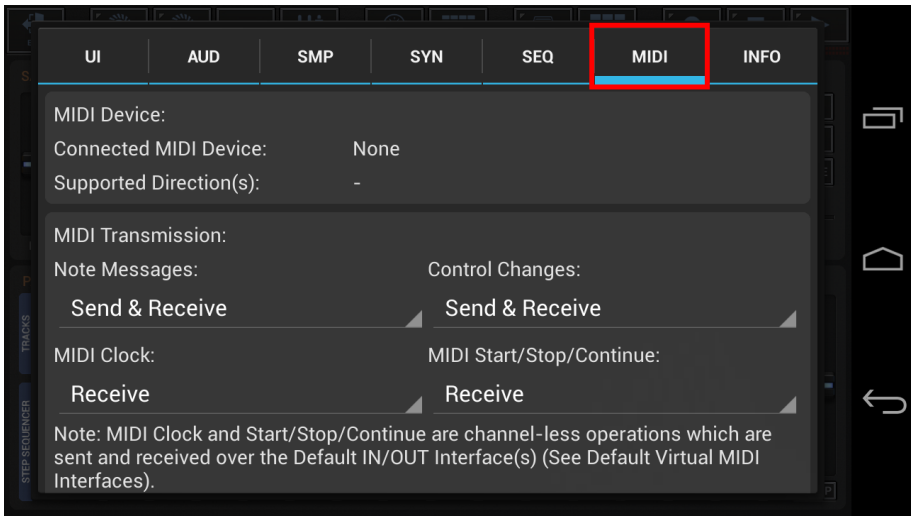
- 1 MIDI Channel for global controls with the option to play all Sampler Tracks at once in one single channel (each on a specific Key/Note)
- Up to 24 MIDI Channels for the Sampler Tracks
- 1 MIDI Channel for the selected Sampler Track

Default setup:
Global listens to all channels on all virtual interfaces.
In the global channel, by default, the Sampler/Drum Tracks are mapped in a non-tonal way; all tracks (T1-24) are mapped to the global MIDI channel to the NoteNo 48-71:C3-B4. You're free to change the mapping either by manually selecting different notes/keys or in use of the MIDI learn feature.
(see Chapter: Edit MIDI CC/Key Mappings)

Note: Mapping more than 16 Channels is only possible if your controller provides multiple Virtual MIDI Interfaces.

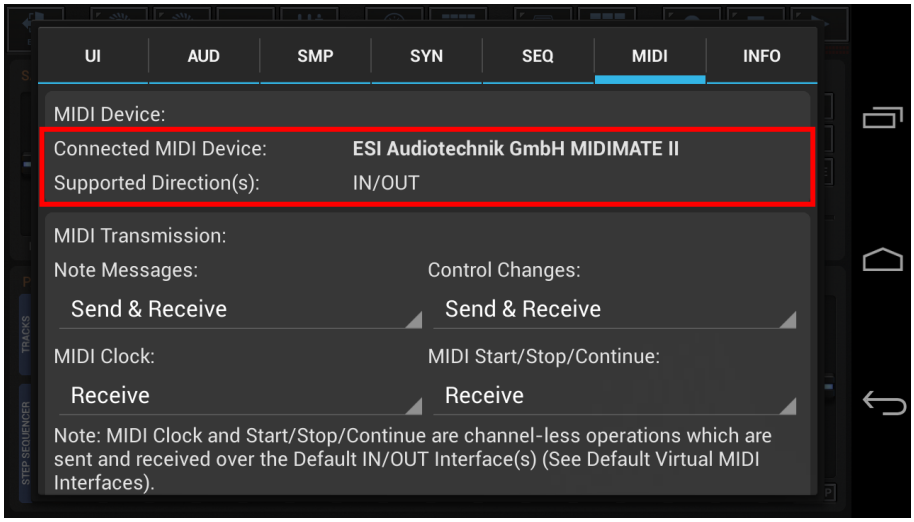
20.3 MIDI Setup

The MIDI settings are located in the MIDI section of the Setup dialog.



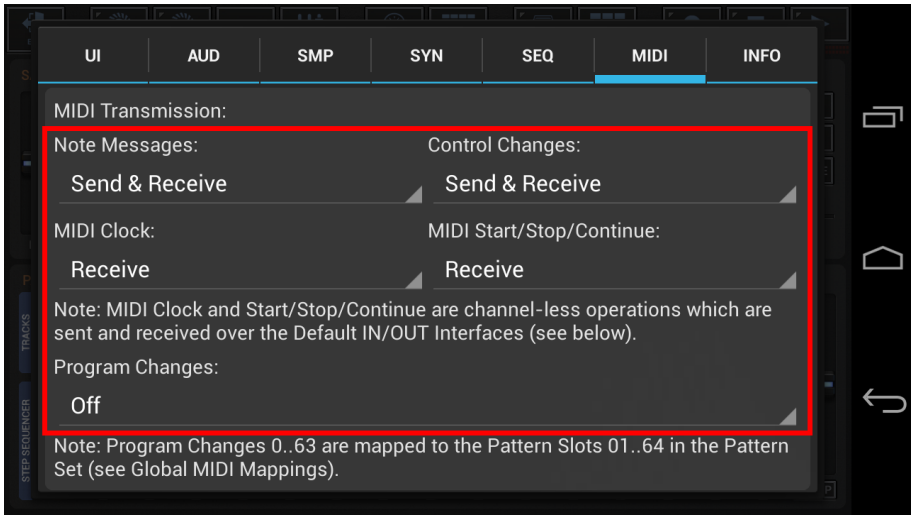
20.3.1 MIDI Device

The MIDI Device section shows the currently connected MIDI device (brand and model) and its supported transmission directions (IN, OUT, IN/OUT).



20.3.2 Midi Transmission

In this section you can globally define, which MIDI messages you want to send and/or receive.



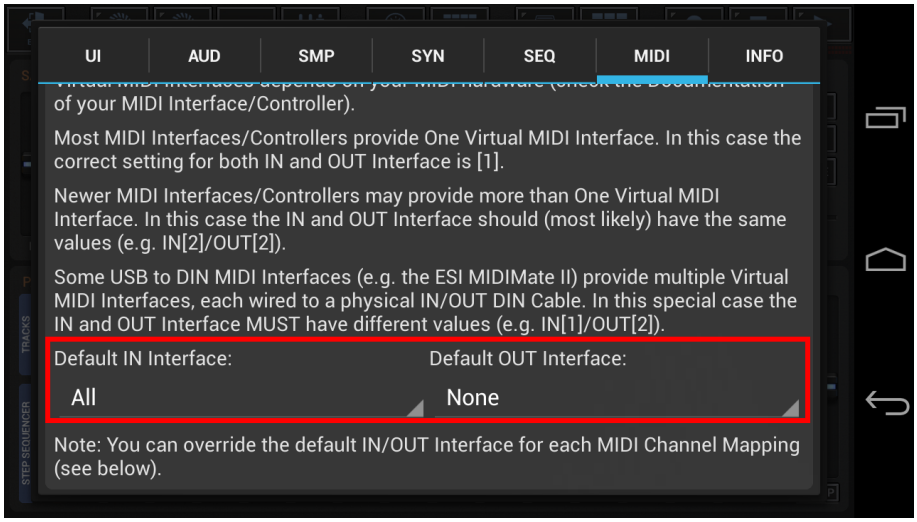
Note Messages:	Send, Receive, Send & Receive, Off
Control Changes:	Send, Receive, Send & Receive, Off
Program Changes:	Send, Receive, Send & Receive, Off
MIDI Clock:	Send, Receive, Off
MIDI Start/Stop/Continue:	Send, Receive, Off

Note:
MIDI Clock and MIDI Start/Stop/Continue are channel-less operations which are sent and received over the Default IN/OUT Interface(s). By default, the default OUT Interface is set to "None". To be able to send MIDI Clock and/or MIDI Start/Stop/Continue, you must set up a default OUT Interface first (see Chapter: Default IN/OUT Interfaces).

20.3.3 Default IN/OUT Interfaces

Some class-compliant MIDI Interfaces/Controllers provide multiple Virtual MIDI Interfaces (to address more than 16 MIDI Channels). These Virtual MIDI Interfaces can be addressed in use of the IN/OUT Interface selectors. The number of available Virtual MIDI Interfaces depends on your MIDI hardware (check the Documentation of your MIDI Interface/Controller).

In this section you can set the default IN/OUT Interfaces.


UI
AUD
SMP
SYN
SEQ
MIDI
INFO
of your MIDI Interface/Controller).
Most MIDI Interfaces/Controllers provide One Virtual MIDI Interface. In this case the correct setting for both IN and OUT Interface is [1].
Newer MIDI Interfaces/Controllers may provide more than One Virtual MIDI Interface. In this case the IN and OUT Interface should (most likely) have the same values (e.g. IN[2]/OUT[2]).
Some USB to DIN MIDI Interfaces (e.g. the ESI MIDIMate II) provide multiple Virtual MIDI Interfaces, each wired to a physical IN/OUT DIN Cable. In this special case the IN and OUT Interface MUST have different values (e.g. IN[1]/OUT[2]).
Default IN Interface:
Default OUT Interface:
All
None
Note: You can override the default IN/OUT Interface for each MIDI Channel Mapping (see below).

The default IN/OUT Interfaces are used in two situations:

1. **As default Interfaces for Track or Global MIDI Channel/Interface Mappings.**
   You can override the default IN/OUT Interface for each MIDI Channel Mapping
   (see Chapter: Global MIDI Mappings, Sampler MIDI Mappings, VA-Beast Synthesizer MIDI Mappings)

2. **To send/receive MIDI Clock and MIDI Start/Stop/Continue real-time messages.**
   By default, the default OUT Interface is set to "None". To be able to send MIDI Clock and/or MIDI Start/Stop/Continue, you must set up a default OUT Interface first.

What you have to choose as IN/OUT Interfaces strongly depends on your MIDI Hardware (Interface, Controller, Keyboard). These are the three most common cases:

MIDI Hardware with One Virtual MIDI Interface:
Most MIDI Interfaces/Controllers provide One Virtual MIDI Interface.
In this case the correct setting for both IN and OUT Interface is [1].

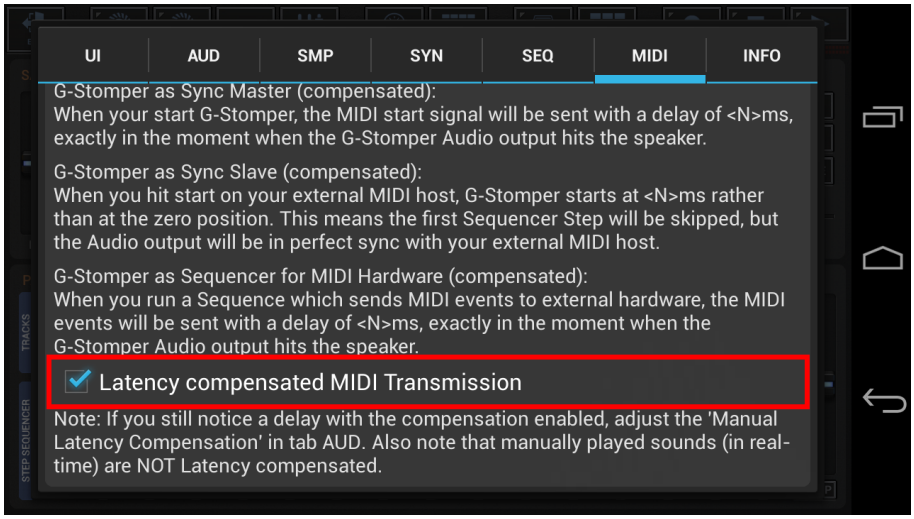
MIDI Hardware with multiple Virtual MIDI Interfaces:
Newer MIDI Interfaces/Controllers may provide more than One Virtual MIDI Interface.
In this case the IN and OUT Interface should (most likely) have the same values (e.g. IN[2]/OUT[2]).

MIDI Hardware with multiple Virtual MIDI Interfaces mapped to physical DIN cables:
Some USB to DIN MIDI Interfaces (e.g. the ESI MIDIMate II) provide multiple Virtual MIDI Interfaces, each wired to a physical IN/OUT DIN Cable.
In this special case the IN and OUT Interface MUST have different values (e.g. IN[1]/OUT[2]).

Note:
A simple way to find out what IN Interface your MIDI Hardware is using is to use the MIDI Channel/Interface learn feature (see Chapter: Setup MIDI Channels/Interfaces).

20.3.4 Latency compensated MIDI Transmission

When starting and synchronizing over MIDI, or when sequencing external MIDI instruments, the G-Stomper Audio output can be noticeable delayed compared to the external MIDI equipment. This Latency of <N>ms can be compensated directly within G-Stomper.


UI
AUD
SMP
SYN
SEQ
MIDI
INFO
G-Stomper as Sync Master (compensated):
When your start G-Stomper, the MIDI start signal will be sent with a delay of <N>ms, exactly in the moment when the G-Stomper Audio output hits the speaker.
G-Stomper as Sync Slave (compensated):
When you hit start on your external MIDI host, G-Stomper starts at <N>ms rather than at the zero position. This means the first Sequencer Step will be skipped, but the Audio output will be in perfect sync with your external MIDI host.
G-Stomper as Sequencer for MIDI Hardware (compensated):
When you run a Sequence which sends MIDI events to external hardware, the MIDI events will be sent with a delay of <N>ms, exactly in the moment when the G-Stomper Audio output hits the speaker.
Latency compensated MIDI Transmission
Note: If you still notice a delay with the compensation enabled, adjust the 'Manual Latency Compensation' in tab AUD. Also note that manually played sounds (in real-time) are NOT Latency compensated.

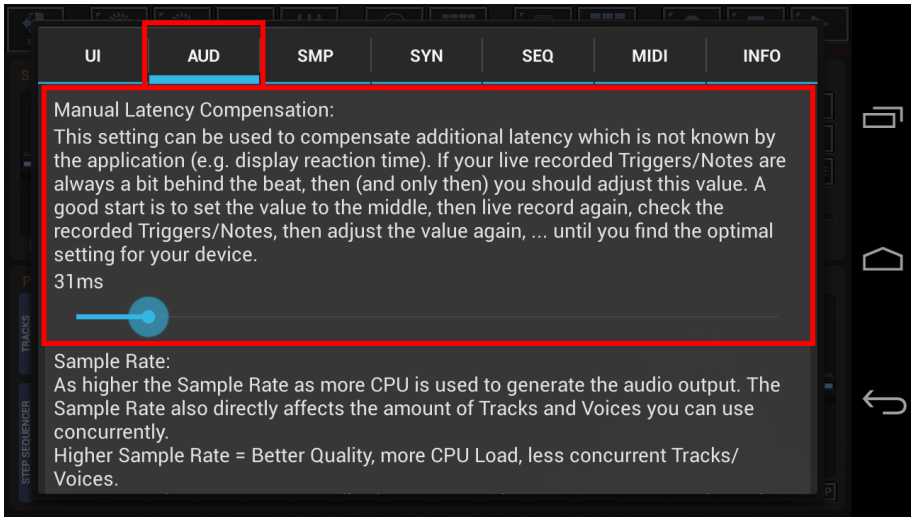
<N> = the complete Latency = Audio Latency + Manual Latency Compensation (see tab AUD)

G-Stomper as Sync Master (compensated):
When your start G-Stomper, the MIDI start signal will be sent with a delay of <N>ms, exactly in the moment when the G-Stomper Audio output hits the speaker.

G-Stomper as Sync Slave (compensated):
When you hit start on your external MIDI host, G-Stomper starts at <N>ms rather than at the zero position. This means the first Sequencer Step will be skipped, but the Audio output will be in perfect sync with your external MIDI host.

G-Stomper as Sequencer for MIDI Hardware (compensated):
When you run a Sequence which sends MIDI events to external hardware, the MIDI events will be sent with a delay of <N>ms, exactly in the moment when the G-Stomper Audio output hits the speaker.

Note: If you still notice a delay with the compensation enabled, adjust the 'Manual Latency Compensation' in tab AUD.


UI
AUD
SMP
SYN
SEQ
MIDI
INFO
Manual Latency Compensation:
This setting can be used to compensate additional latency which is not known by the application (e.g. display reaction time). If your live recorded Triggers/Notes are always a bit behind the beat, then (and only then) you should adjust this value. A good start is to set the value to the middle, then live record again, check the recorded Triggers/Notes, then adjust the value again, ... until you find the optimal setting for your device.
31ms
Sample Rate:
As higher the Sample Rate as more CPU is used to generate the audio output. The Sample Rate also directly affects the amount of Tracks and Voices you can use concurrently.
Higher Sample Rate = Better Quality, more CPU Load, less concurrent Tracks/ Voices.

Note: Also note that manually played sounds (in real-time) are NOT Latency compensated.

- **Compensated MIDI Transmissions**
  - Incoming Notes and Control Changes while Recording
  - Outgoing MIDI from a running Sequence

- **NOT compensated MIDI Transmissions**
  - Manual played Notes (in real-time) from the G-Stomper on-screen Keyboard
  - Manual played notes (in real-time) from external MIDI Keyboard

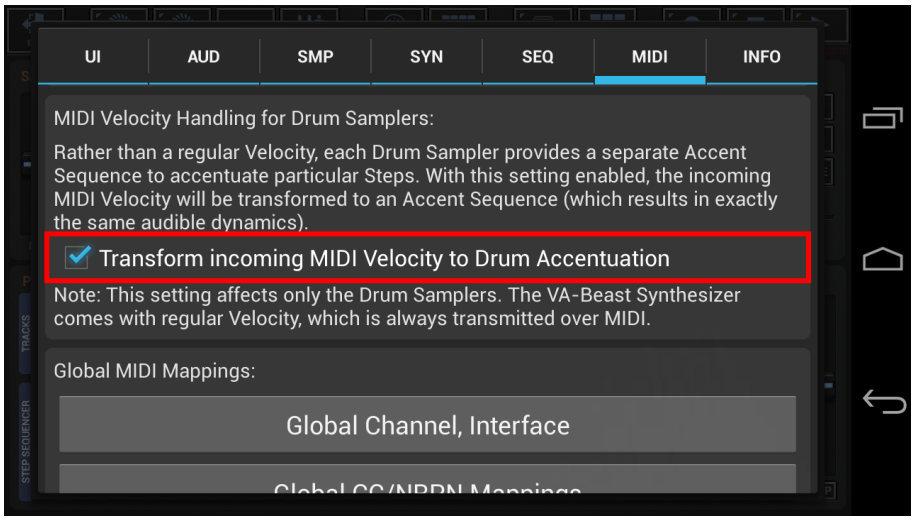
20.3.5 MIDI Velocity Handling for Drum Samplers

Rather than a regular Velocity, each Drum Sampler provides a separate Accent Sequence to accentuate particular Steps. MIDI Note messages on the other hand always contain a Velocity value in a range from 0..127.

Outgoing Velocity from Drum Samplers:
Outgoing MIDI messages from Drum Samplers are always automatically transformed from Accentuation to MIDI Velocity.

Incoming Velocity to Drum Samplers:
Incoming MIDI messages are only transformed from MIDI Velocity to Drum Accentuation, if the "Transform incoming MIDI Velocity to Drum Accentuation" Setting is enabled (which is the default).

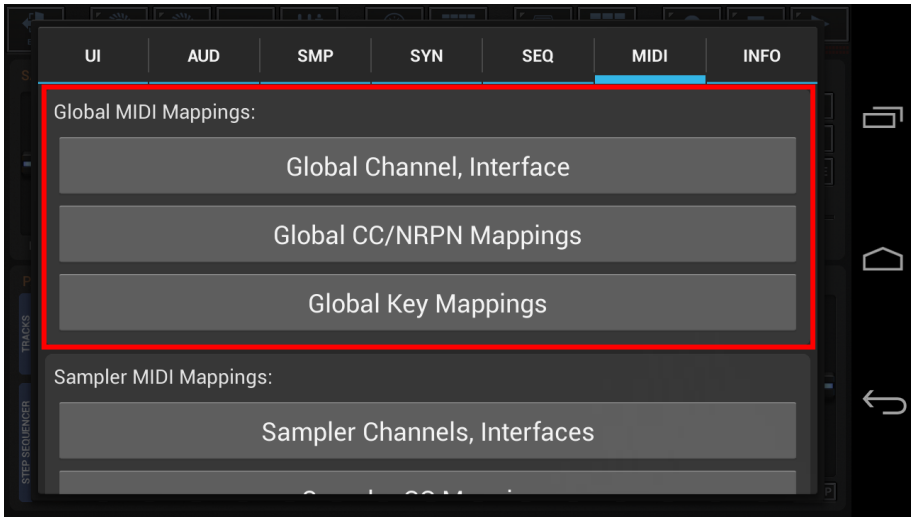
Disable the setting to ignore the incoming MIDI Velocity for Drum Samplers and keep the existing Drum Accents.


UI
AUD
SMP
SYN
SEQ
MIDI
INFO
MIDI Velocity Handling for Drum Samplers:
Rather than a regular Velocity, each Drum Sampler provides a separate Accent Sequence to accentuate particular Steps. With this setting enabled, the incoming MIDI Velocity will be transformed to an Accent Sequence (which results in exactly the same audible dynamics).
Transform incoming MIDI Velocity to Drum Accentuation
Note: This setting affects only the Drum Samplers. The VA-Beast Synthesizer comes with regular Velocity, which is always transmitted over MIDI.
Global MIDI Mappings:
Global Channel, Interface

Note: This setting affects only the Drum Samplers. The VA-Beast Synthesizer comes with regular Velocity, which is always transmitted over MIDI.

20.3.6 Global MIDI Mappings

In this section you can set the global MIDI Channel/Interface as well as all global MIDI CC and Key Mappings. Key Mappings, which are unique in the Global MIDI Mappings, let you map Keyboard Notes to several internal functions (like Sample Playback or Solo/Mute on multiple Tracks).



Rather than Sampler and VA-Beast MIDI Mappings, Global MIDI Mappings are not bound to a specific Track. Global MIDI Mapping are either related to global Modules or to a specific Paramter on multiple Tracks (e.g. Solo/Mute).

- FX, SUM FX, Master (CC Mappings)
- Pattern Set (CC Mappings + Program Changes)
- Timing & Measure (CC + NRPN Mappings)
- Main Sequencer (CC Mappings)
- Solo/Mute for all Sampler and VA-Beast Tracks (Key Mappings)
- R-Arp for all Sampler Tracks (CC + Key Mappings)
- Non-tonal Sampler Playback for all Sampler Tracks (Key Mappings)

Note:

20.3.6.1 Fixed Pattern Set Program Change Mapping

The 64 Pattern Slots in the Pattern Set have a fixed Mapping to Program Change 0..63.
Program Changes internally start from zero, which means sending a Program Change 0 will activate Slot 01.

20.3.6.2 Fixed Timing & Measure Tempo/BPM

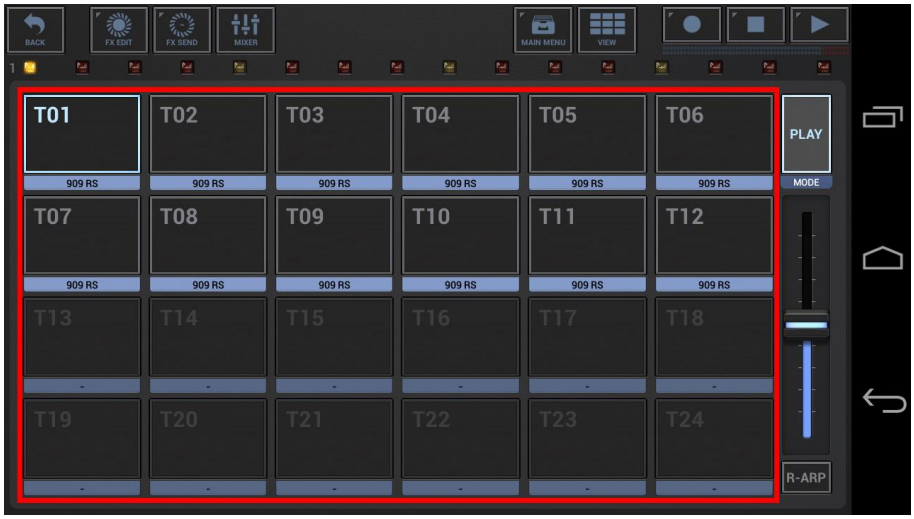
Since the Tempo/BMP requires extra high accuracy (30.0 up to 300.0 bpm). Therefore an NRPN is used as inbound Mapping for the Tempo/BPM Parameter.

The Tempo/BPM has a fixed Mapping to NRPN 138 (MSB 1, LSB 10).

Note: Tempo/BPM is received only, but NOT sent.

20.3.6.3 Non-tonal Sampler Playback for all Sampler Tracks

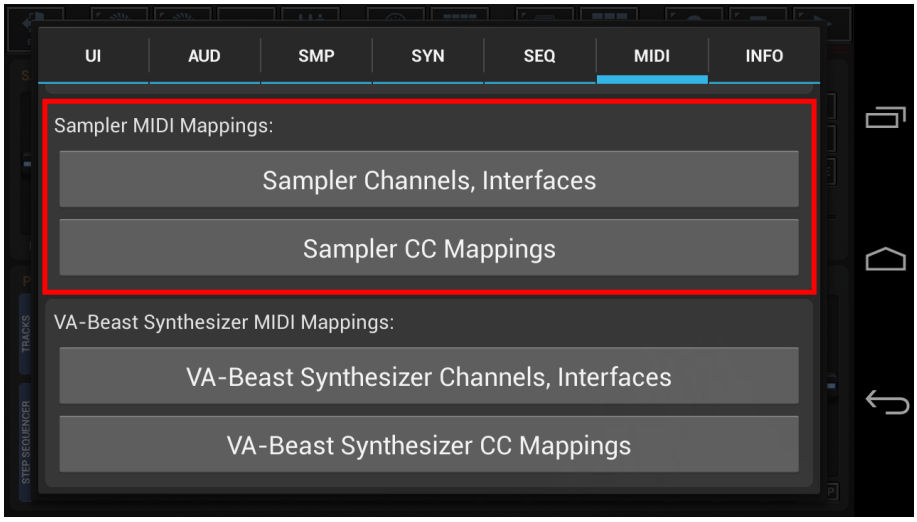
Key Mappings are unique in the Global MIDI Mappings and let you map Keyboard Notes to several internal functions (like Sample Playback or Solo/Mute on multiple Tracks).

By default, the Sampler/Drum Tracks are mapped in a non-tonal way; all tracks (T1-24) are mapped to the Global MIDI Channel, to the NoteNo 48-71:C3-B4. You're free to change the mapping either by manually selecting different notes/keys or in use of the MIDI learn feature.
(see Chapter: Edit MIDI CC/Key Mappings)

20.3.7 Sampler MIDI Mappings

In this section you can set the Sampler MIDI Channels/Interfaces and MIDI CC Mappings.

The Sampler/Drum Tracks can each be mapped to a separate MIDI channel.
(You can also map multiple Tracks to the same MIDI channel)

All Sampler MIDI Mappings are per Track (T[..]).



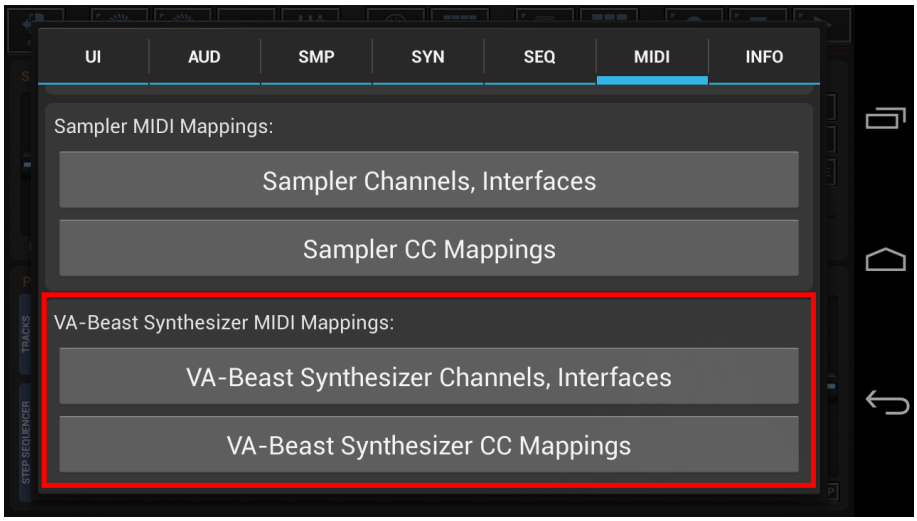
Note:
If you prefer a non-tonal mapping to trigger all Sampler Tracks within one single channel, you can use the Global MIDI channel instead (see Chapter: Global MIDI Channel - Drum Machine Mapping).

20.3.8 VA-Beast Synthesizer MIDI Mappings

In this section you can set the VA-Beast Synthesizer MIDI Channels/Interfaces and MIDI CC Mappings.

The VA-Beast Synthesizer Tracks can each be mapped to a separate MIDI channel.
(You can also map multiple Tracks to the same MIDI channel)

All VA-Beast Synthesizer MIDI Mappings are per Track (VT[..]).



20.4 Setup MIDI Channels/Interfaces

The MIDI Channel/Interface settings are located in the different MIDI sections of the Setup dialog. G-Stomper Studio lets you map MIDI Channels/Interfaces to various modules across the application.

- "Global", all modules of functions which are not bound to a particular track T[..] or VT[..]: Sequencer, Timing & Measure, FX, Master, Sum FX, R-Arp, Stutter, Pattern Set, etc., and the option to play all Sampler Tracks at once in one single channel (each on a specific Key/Note).

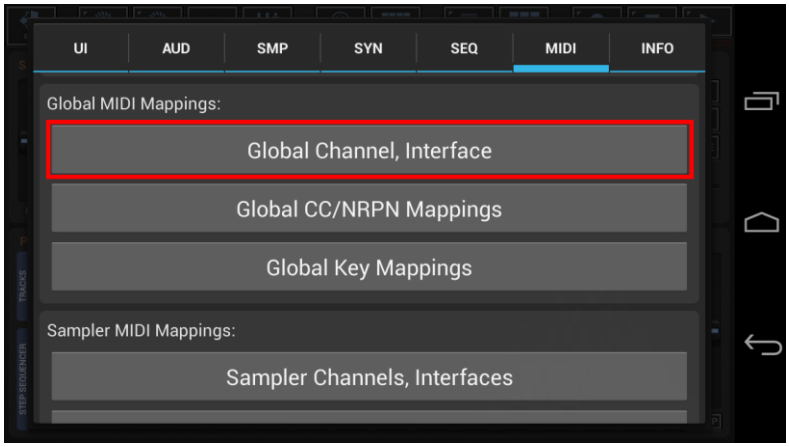
- The selected Sampler Track:
  In this case, MIDI events will always be fired to and received from the currently selected Track T[..].

- Each Sampler Track separately (e.g. T01, T02):
  In this case, MIDI events will be fired to and received from the mapped Tracks (regardless which Track is selected).

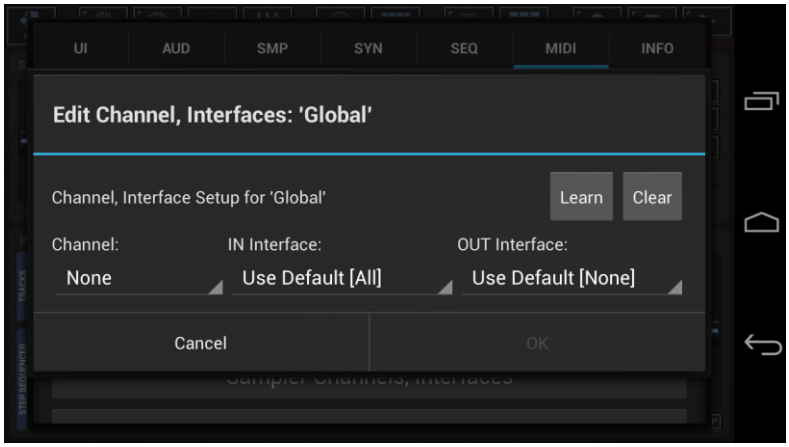
- The selected VA-Beast Track:
  In this case, MIDI events will always be fired to and received from the currently selected Track VT[..].

- Each VA-Beast Track separately (e.g. VT01, VT02):
  In this case, MIDI events will be fired to and received from the mapped Tracks (regardless which Track is selected).

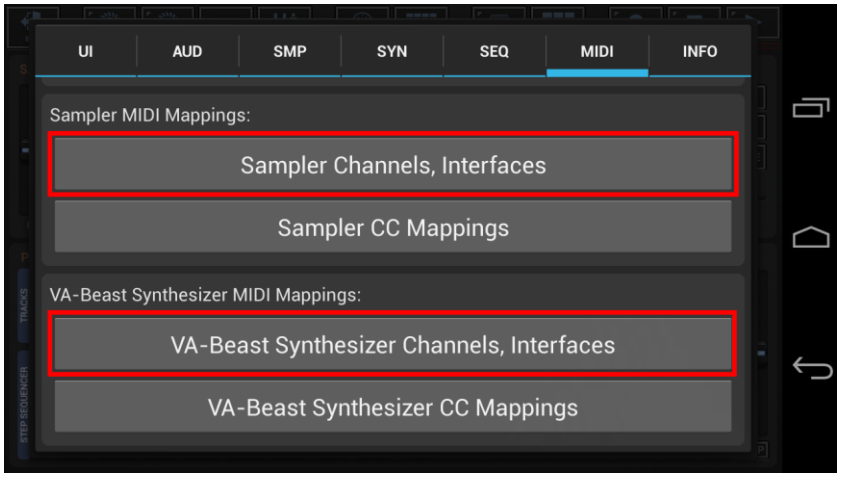
To show the existing Global Channel/Interface, press the "Global Channel, Interface" button in the Global Midi Mappings section.



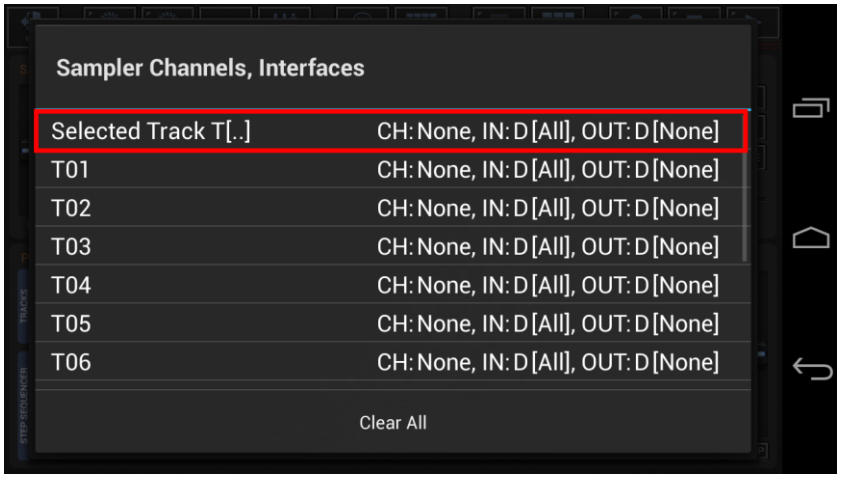
In the detail view you can either manually edit the Channel/Interface or learn it by MIDI.



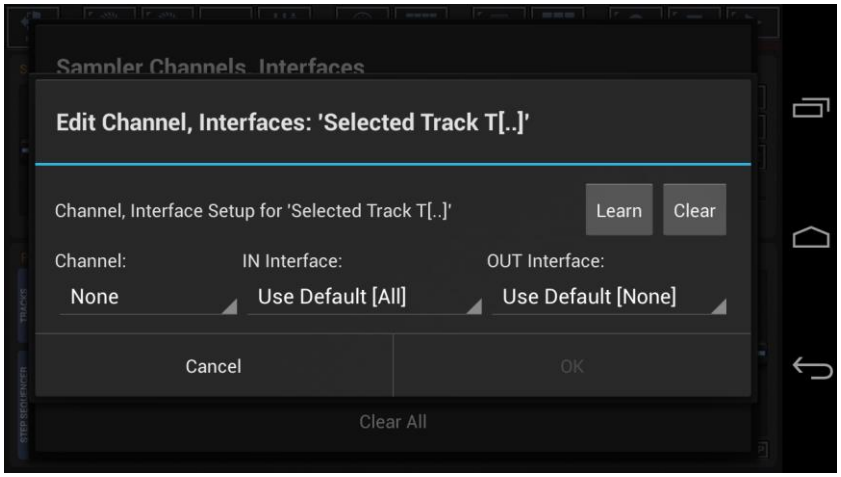
To show the existing Channel/Interface of a particular Track, press the "… Channels, Interfaces" button in the appropriate section.



Then select the Track you want to show.

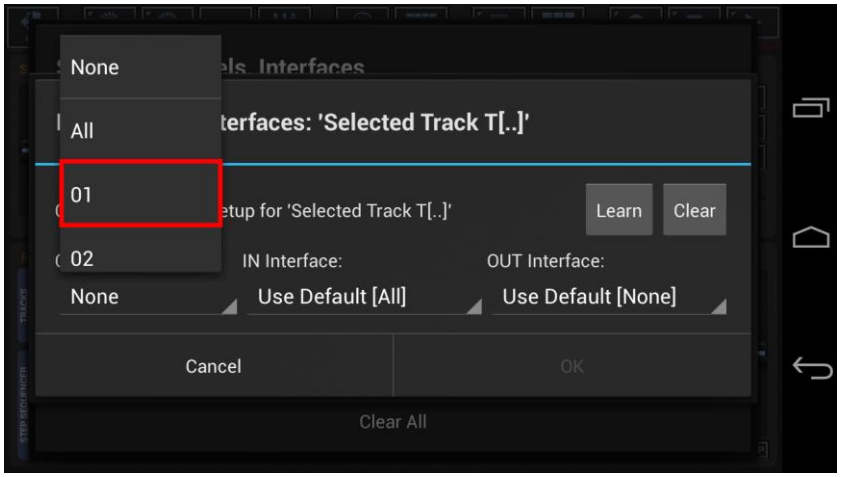

Sampler Channels, Interfaces
Selected Track T[..] CH: None, IN: D [All], OUT: D [None]
T01 CH: None, IN: D [All], OUT: D [None]
T02 CH: None, IN: D [All], OUT: D [None]
T03 CH: None, IN: D [All], OUT: D [None]
T04 CH: None, IN: D [All], OUT: D [None]
T05 CH: None, IN: D [All], OUT: D [None]
T06 CH: None, IN: D [All], OUT: D [None]
Clear All

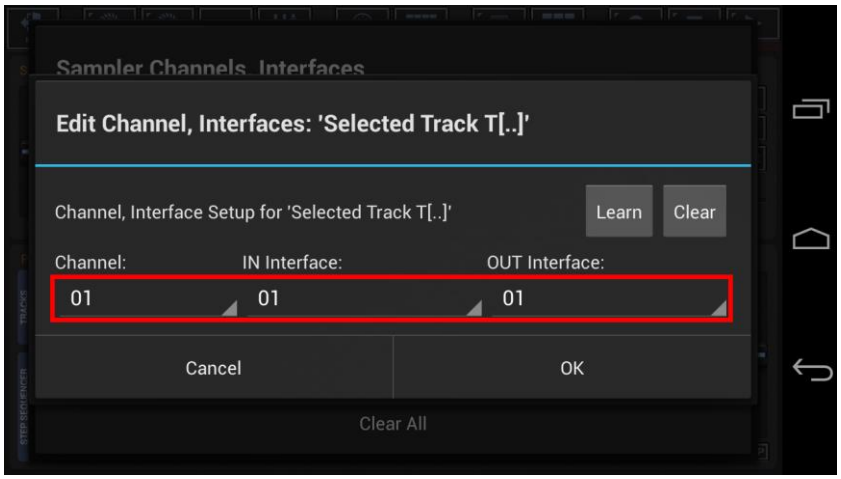
In the detail view you can either manually edit the Channel/Interface or learn it by MIDI.



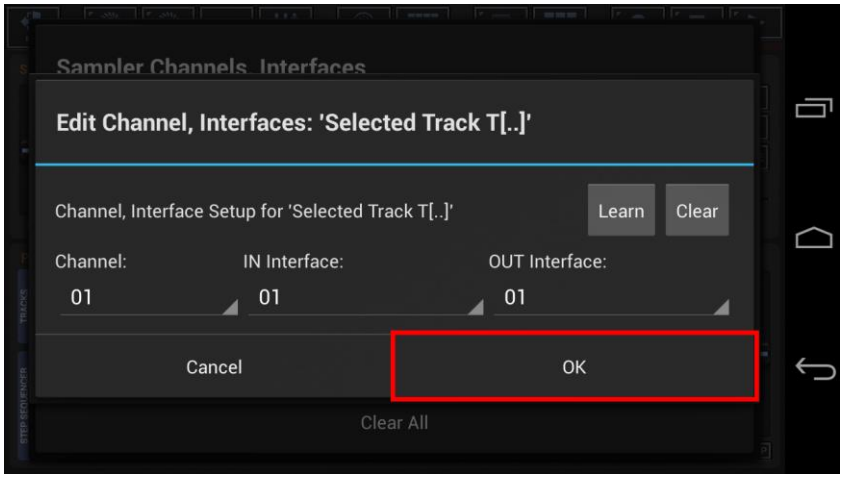
20.4.1 Manual Edit MIDI Channel/Interface

To edit a mapping manually, simply select the desired values from the drop down lists.





Finally confirm with OK to update the mapping.

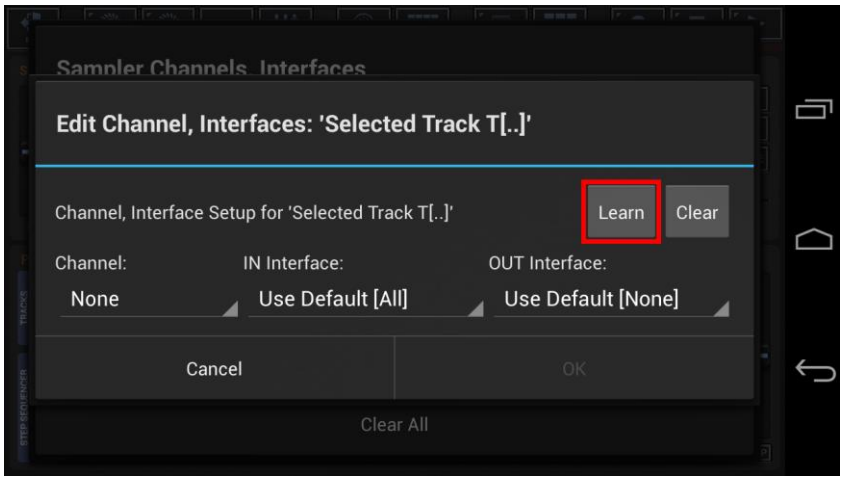


Note:
Be sure to check out the MIDI Learn function, which is the easiest way to edit MIDI Channels/Interfaces. (see Chapter: Learn MIDI Channel/Interface)

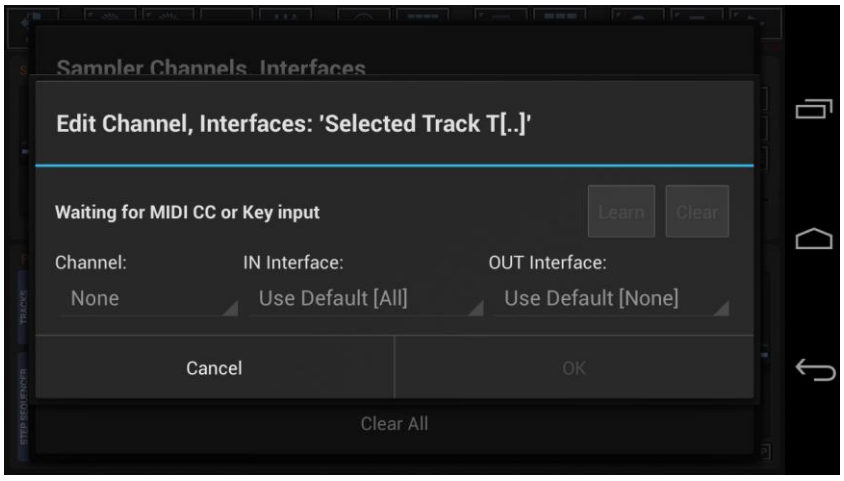
20.4.2 Learn MIDI Channel/Interface

The probably easiest way to set up MIDI Channels/Interfaces is to learn them by MIDI. In other words you touch a MIDI CC or piano key on your controller and G-Stomper learns the Channel/Interface automatically.

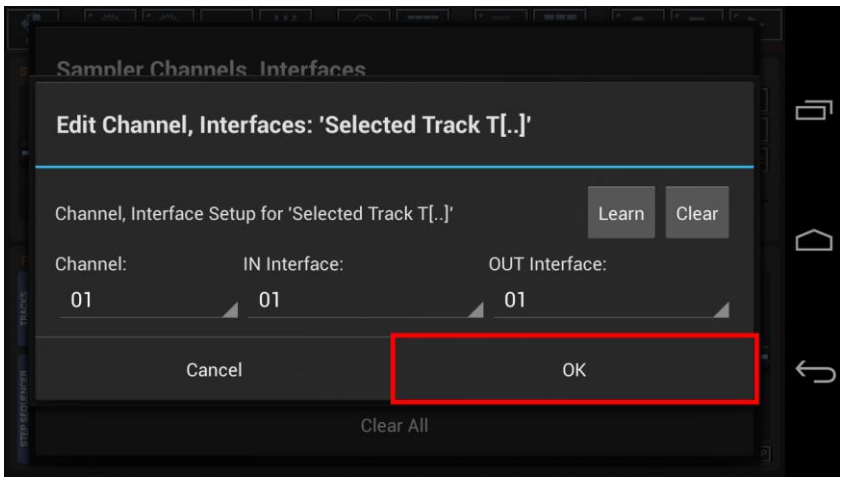
To learn a MIDI Channel/Interface, simply press the Learn button.



Then touch knob, button or a piano key on your MIDI controller.



Finally confirm with OK to update the mapping.

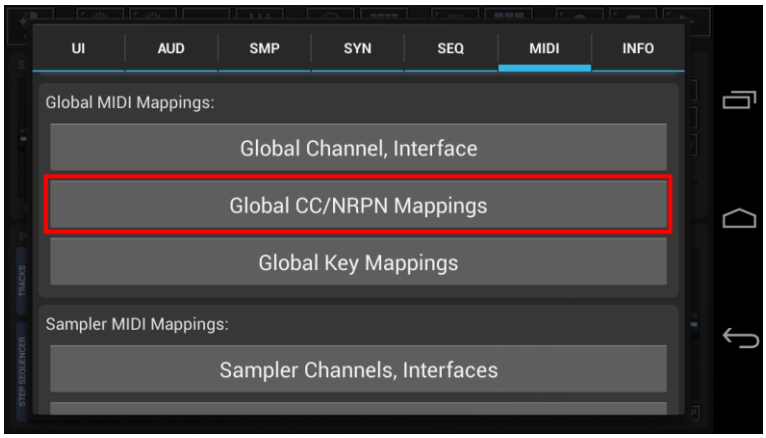


20.5 Setup MIDI CC/Key Mappings

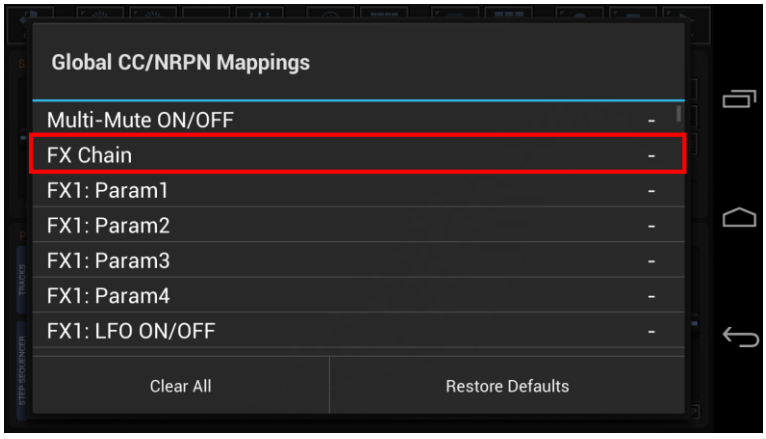
The MIDI CC and Key mappings are located in the in the different MIDI sections of the Setup dialog. G-Stomper Studio offers a wide range of default MIDI CC/NRPN and Key mappings. You can use them out of the box or you're of course free to customize them for your personal needs.

Note: The default mappings are listed in the Chapters: Global MIDI CC/NRPN Mapping Chart, Global MIDI Key Mapping Chart, Sampler MIDI CC Mapping Chart, VA-Beast MIDI Mapping Chart.

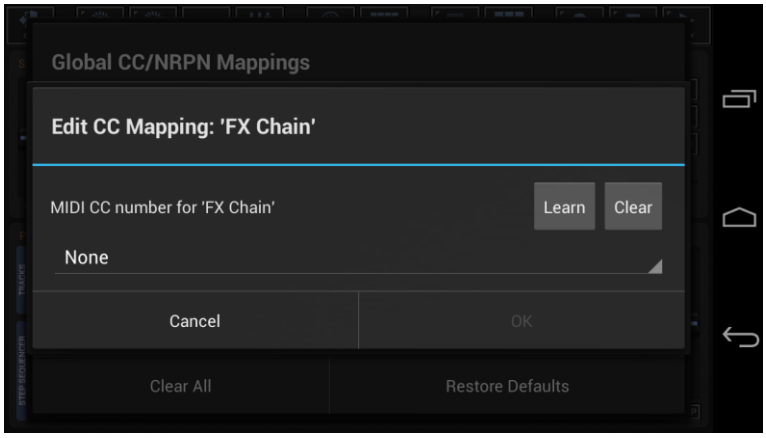
To show the existing mappings, press the CC or Key Mappings button in the appropriate section.



Then select the mapping which you want to change.

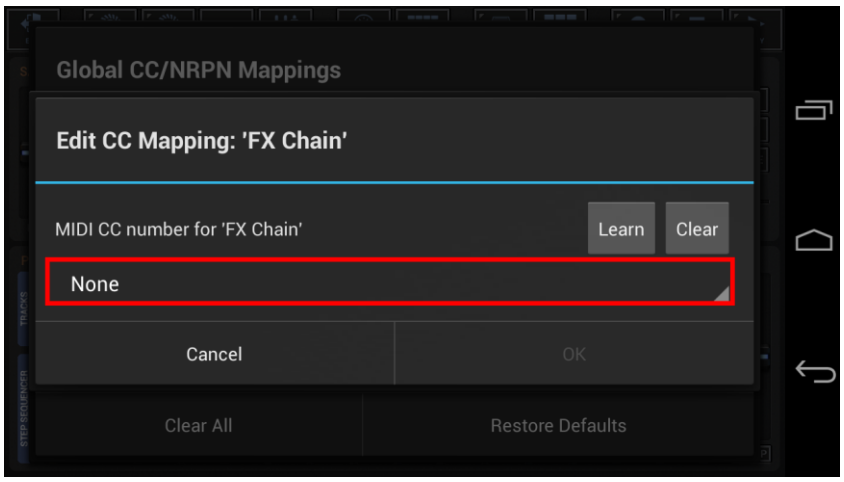


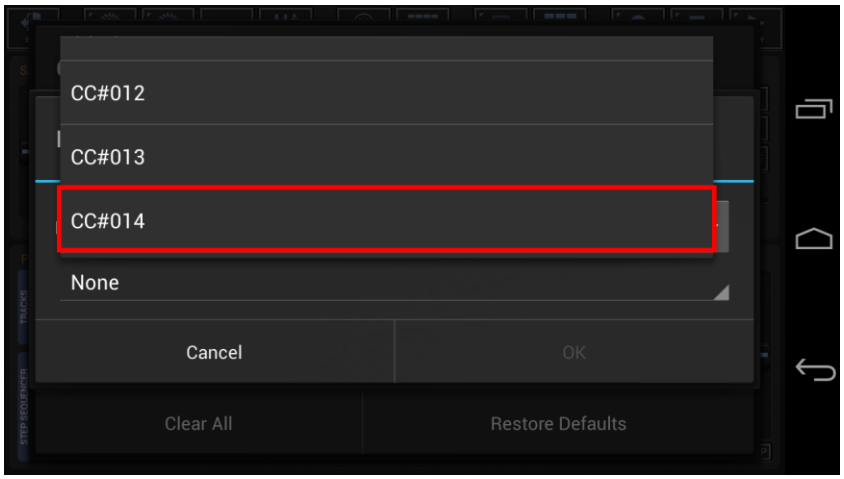
In the detail view you can either manually edit the mapping or learn it by MIDI.



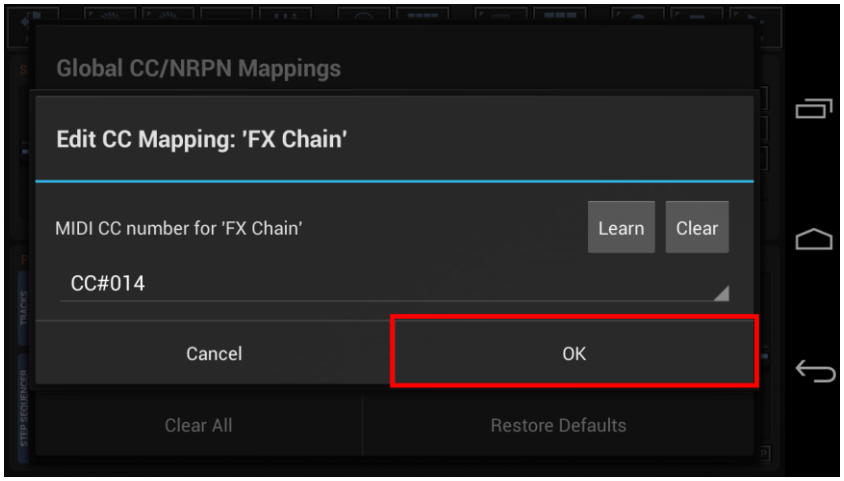
20.5.1 Manual Edit MIDI CC/Key Mapping

To edit a mapping manually, simply select one of the CC#[…] from the drop down list.





Finally confirm with OK to update the mapping.

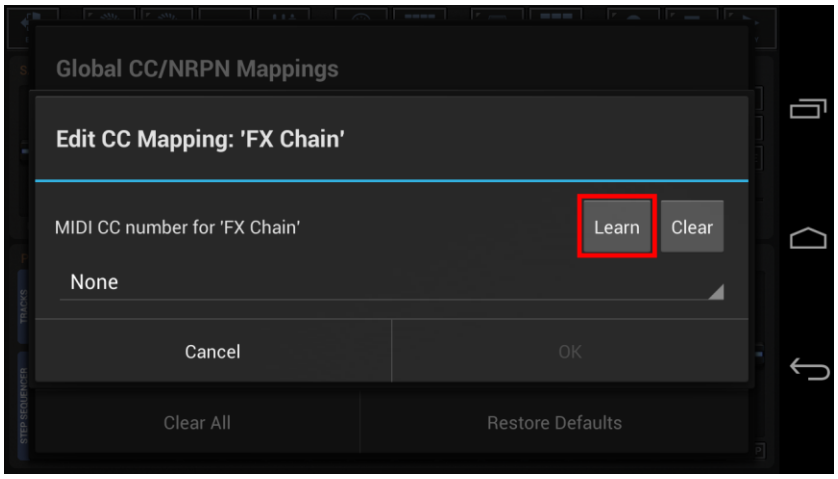


Note:
Be sure to check out the MIDI Learn function, which is the easiest way to edit your mappings.
(see Chapter: Learn MIDI CC/Key Mapping)

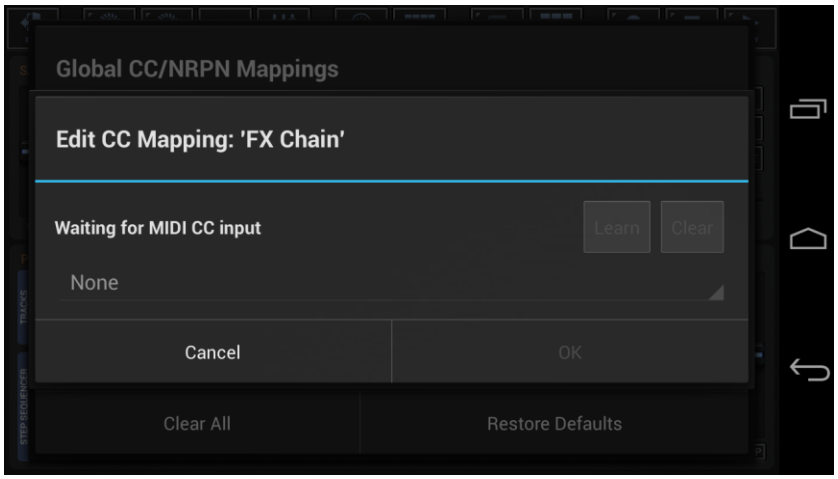
20.5.2 Learn MIDI CC/Key Mapping

The probably easiest way to create your own MIDI mappings is to learn them by MIDI. In other words you turn a MIDI CC on your controller and G-Stomper learns the CC number automatically.

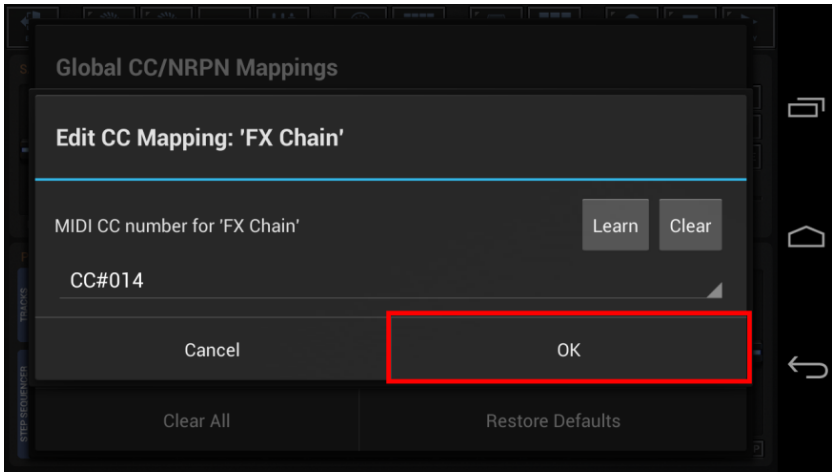
To learn a MIDI Mapping, simply press the Learn button.



Then touch the desired knob or button on your MIDI controller.



Finally confirm with OK to update the mapping.

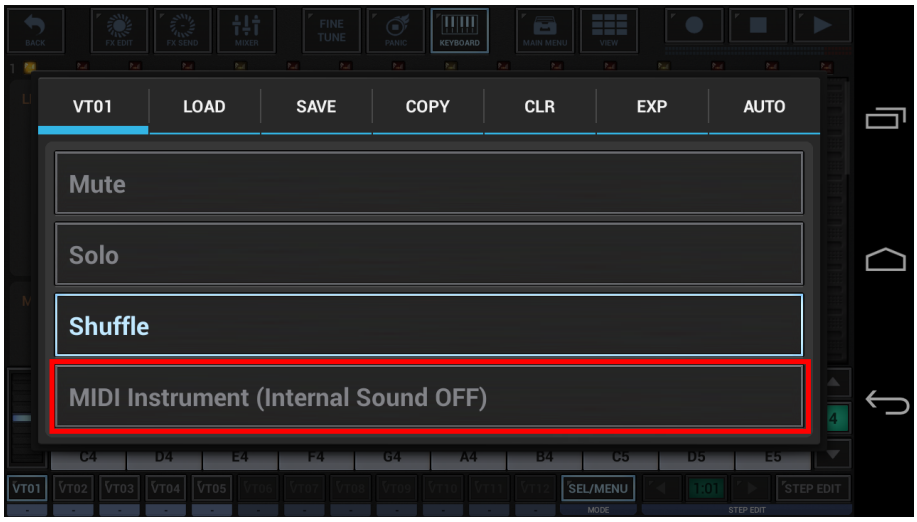


20.6 Pure MIDI Instrument Tracks

Every Track in G-Stomper can be used as pure MIDI Instrument Track, in other words to control an external MIDI Instrument rather than the internal Audio Source.

Long press one of the Track buttons to show up the Track Menu.

Enable the option „MIDI Instrument (Internal Sound OFF)" to control an external MIDI Instrument with this Track, rather than the internal Audio Source. Using a Track as [MIDI Instrument] means, the internal Sound will be disabled and only MIDI events will be fired from the Track. Be sure to configure the MIDI Channels, IN/OUT Interfaces in the G-Stomper Setup before you enable this option.



Note: As a matter of course, you can use a Sampler Track in the same way.

20.7 MIDI CC & Key Mapping Charts

The following Chapters show the default MIDI CC and Key mapping in G-Stomper Studio. You are of course free to customize the mappings to your own needs.

20.7.1 Global MIDI CC/NRPN Mapping Chart

Programmable Multi-Mute:	**Default Mapping**
Multi-Mute ON/OFF	-

Common FX Parameters:	**Default Mapping**
FX Chain	-

FX1 Parameters:	**Default Mapping**
FX1: Param1	-
FX1: Param2	-
FX1: Param3	-
FX1: Param4	-
FX1: LFO ON/OFF	-
FX1: LFO Waveform	-
FX1: Envelope Follower ON/OFF	-
FX1: Sync ON/OFF	-
FX1: Type	-
FX1: Bypass ON/OFF	-

FX2 Parameters:	Default Mapping
FX2: Param1	-
FX2: Param2	-
FX2: Param3	-
FX2: Param4	-
FX2: LFO ON/OFF	-
FX2: LFO Waveform	-
FX2: Envelope Follower ON/OFF	-
FX2: Sync ON/OFF	-
FX2: Type	-
FX2: Bypass ON/OFF	-

FX3 Parameters:	Default Mapping
FX3: Param1	-
FX3: Param2	-
FX3: Param3	-
FX3: Param4	-
FX3: LFO ON/OFF	-
FX3: LFO Waveform	-
FX3: Envelope Follower ON/OFF	-
FX3: Sync ON/OFF	-
FX3: Type	-
FX3: Bypass ON/OFF	-

SUM FX1 Parameters:	Default Mapping
SUM FX1: Param1	-
SUM FX1: Param2	-
SUM FX1: Param3	-
SUM FX1: Param4	-
SUM FX1: LFO ON/OFF	-
SUM FX1: LFO Waveform	-
SUM FX1: Envelope Follower ON/OFF	-
SUM FX1: Sync ON/OFF	-
SUM FX1: Type	-
SUM FX1: Bypass ON/OFF	-

SUM FX2 Parameters:	Default Mapping
SUM FX2: Param1	-
SUM FX2: Param2	-
SUM FX2: Param3	-
SUM FX2: Param4	-
SUM FX2: LFO ON/OFF	-
SUM FX2: LFO Waveform	-
SUM FX2: Envelope Follower ON/OFF	-
SUM FX2: Sync ON/OFF	-
SUM FX2: Type	-
SUM FX2: Bypass ON/OFF	-

Master Parameters:	Default Mapping
Lock Master ON/OFF	-
Master: Volume	-
Master: Panorama	-
Master: Bypass	-
Master: Pre/Post SUM FX	-

Master Parametric EQ Parameters:	Default Mapping
Master: Low EQ ON/OFF	-
Master: Low EQ Shelf/Peak	-
Master: Low EQ Frequency	-
Master: Low EQ Q	-
Master: Low EQ Gain	-
Master: Mid EQ ON/OFF	-
Master: Mid EQ Frequency	-
Master: Mid EQ Q	-
Master: Mid EQ Gain	-
Master: High EQ ON/OFF	-
Master: High EQ Shelf/Peak	-
Master: High EQ Frequency	-
Master: High EQ Q	-
Master: High EQ Gain	-
Master: EQ Out	-

Patter Set Parameters:	**Default Mapping**
Pattern Set: Chain ON/OFF	-
Pattern Set: Song Mode ON/OFF	-
Pattern Set: Song Position UP	-
Pattern Set: Song Position Down	-
Pattern Set: Pattern Slots 01..64 (Fixed Mapping!)	Prog.Change 0..63

Timing & Measure Parameters:	**Default Mapping**
Timing & Measure: Tempo/BPM (Fixed Mapping, MIDI IN only!)	NRPN 138 (MSB 1, LSB 10)
Timing & Measure: Tap Tempo	-
Timing & Measure: Swing/Shuffle	-
Timing & Measure: Steps Per Bar	-
Timing & Measure: Length in Bars	-

Sequencer Parameters:	**Default Mapping**
Sequencer: Loop ON/OFF	-
Sequencer: R-Arp Rate	-
Sequencer: R-Arp ON/OFF	-
Sequencer: Stutter Rate	-
Sequencer: Stutter ON/OFF	-
Sequencer: Play	-
Sequencer: Stop	-
Sequencer: Record	-

20.7.2 Global MIDI Key Mapping Chart

T[..]: Play/Trigger Sample:	Default Mapping
T01: Play Sample	C3 (048)
T02: Play Sample	C#3 (049)
T03: Play Sample	D3 (050)
T04: Play Sample	D#3 (051)
T05: Play Sample	E3 (052)
T06: Play Sample	F3 (053)
T07: Play Sample	F#3 (054)
T08: Play Sample	G3 (055)
T09: Play Sample	G#3 (056)
T10: Play Sample	A3 (057)
T11: Play Sample	A#3 (058)
T12: Play Sample	B3 (059)
T13: Play Sample	C4 (060)
T14: Play Sample	C#4 (061)
T15: Play Sample	D4 (062)
T16: Play Sample	D#4 (063)
T17: Play Sample	E4 (064)
T18: Play Sample	F4 (065)
T19: Play Sample	F#4 (066)
T20: Play Sample	G4 (067)
T21: Play Sample	G#4 (068)
T22: Play Sample	A4 (069)
T23: Play Sample	A#4 (070)
T24: Play Sample	B4 (071)

T[..]: Rhythm Arp ON/OFF:	Default Mapping
T01: R-Arp ON/OFF	-
T02: R-Arp ON/OFF	-
T03: R-Arp ON/OFF	-
T04: R-Arp ON/OFF	-
T05: R-Arp ON/OFF	-
T06: R-Arp ON/OFF	-
T07: R-Arp ON/OFF	-
T08: R-Arp ON/OFF	-
T09: R-Arp ON/OFF	-
T10: R-Arp ON/OFF	-
T11: R-Arp ON/OFF	-
T12: R-Arp ON/OFF	-
T13: R-Arp ON/OFF	-
T14: R-Arp ON/OFF	-
T15: R-Arp ON/OFF	-
T16: R-Arp ON/OFF	-
T17: R-Arp ON/OFF	-
T18: R-Arp ON/OFF	-
T19: R-Arp ON/OFF	-
T20: R-Arp ON/OFF	-
T21: R-Arp ON/OFF	-
T22: R-Arp ON/OFF	-
T23: R-Arp ON/OFF	-
T24: R-Arp ON/OFF	-

T[..]/VT[..]: Solo ON/OFF	Default Mapping
T01: Solo ON/OFF	-
T02: Solo ON/OFF	-
T03: Solo ON/OFF	-
T04: Solo ON/OFF	-
T05: Solo ON/OFF	-
T06: Solo ON/OFF	-
T07: Solo ON/OFF	-
T08: Solo ON/OFF	-
T09: Solo ON/OFF	-
T10: Solo ON/OFF	-
T11: Solo ON/OFF	-
T12: Solo ON/OFF	-
T13: Solo ON/OFF	-
T14: Solo ON/OFF	-
T15: Solo ON/OFF	-
T16: Solo ON/OFF	-
T17: Solo ON/OFF	-
T18: Solo ON/OFF	-
T19: Solo ON/OFF	-
T20: Solo ON/OFF	-
T21: Solo ON/OFF	-
T22: Solo ON/OFF	-
T23: Solo ON/OFF	-
T24: Solo ON/OFF	-
VT01: Solo ON/OFF	-
VT02: Solo ON/OFF	-

VT03: Solo ON/OFF	-
VT04: Solo ON/OFF	-
VT05: Solo ON/OFF	-
VT06: Solo ON/OFF	-
VT07: Solo ON/OFF	-
VT08: Solo ON/OFF	-
VT09: Solo ON/OFF	-
VT10: Solo ON/OFF	-
VT11: Solo ON/OFF	-
VT12: Solo ON/OFF	-
Reset Solo (all OFF)	-

T[..]/VT[..]: Mute ON/OFF	Default Mapping
T01: Mute ON/OFF	C5 (072)
T02: Mute ON/OFF	C#5 (073)
T03: Mute ON/OFF	D5 (074)
T04: Mute ON/OFF	D#5 (075)
T05: Mute ON/OFF	E5 (076)
T06: Mute ON/OFF	F5 (077)
T07: Mute ON/OFF	F#5 (078)
T08: Mute ON/OFF	G5 (079)
T09: Mute ON/OFF	G#5 (080)
T10: Mute ON/OFF	A5 (081)
T11: Mute ON/OFF	A#5 (082)
T12: Mute ON/OFF	B5 (083)
T13: Mute ON/OFF	C6 (084)
T14: Mute ON/OFF	C#6 (085)
T15: Mute ON/OFF	D6 (086)
T16: Mute ON/OFF	D#6 (087)
T17: Mute ON/OFF	E6 (088)
T18: Mute ON/OFF	F6 (089)
T19: Mute ON/OFF	F#6 (090)
T20: Mute ON/OFF	G6 (091)
T21: Mute ON/OFF	G#6 (092)
T22: Mute ON/OFF	A6 (093)
T23: Mute ON/OFF	A#6 (094)
T24: Mute ON/OFF	B6 (095)
VT01: Mute ON/OFF	C7 (096)
VT02: Mute ON/OFF	C#7 (097)

VT03: Mute ON/OFF	D7 (098)
VT04: Mute ON/OFF	D#7 (099)
VT05: Mute ON/OFF	E7 (100)
VT06: Mute ON/OFF	F7 (101)
VT07: Mute ON/OFF	F#7 (102)
VT08: Mute ON/OFF	G7 (103)
VT09: Mute ON/OFF	G#7 (104)
VT10: Mute ON/OFF	A7 (105)
VT11: Mute ON/OFF	A#7 (106)
VT12: Mute ON/OFF	B7 (107)
Reset Mute (all OFF)	C8 (108)

20.7.3 Sampler MIDI CC Mapping Chart

Sample/Track Parameters:	Default Mapping
Panorama (Channel: Panorama in general parameters)	CC#114
Level	CC#071
Accent Amount	CC#037
Start	CC#073
Length	CC#036
Pitch	CC#079
Roll	CC#072
Roll-Internal Accent ON/OFF	CC#075
Normalize ON/OFF	CC#056
Reverse ON/OFF	CC#107
Fill-in Mode	CC#054
Fill-in Hold ON/OFF	CC#055

Filter Parameters:	Default Mapping
Filter Type (LP12/HP12/LP24/HP24/BP/NP/MoogLP/MoogHP)	CC#074
Filter Cutoff Frequency	CC#042
Filter Resonance (also Bandwidth for BP/NP)	CC#044

Mod Env Parameters:	Default Mapping
Mod Env Target	CC#028
Mod Env Depth	CC#029
Mod Env Reverse ON/OFF	CC#108
Mod Env Type (Lin/Exp)	CC#109

LFO Parameters:	Default Mapping
LFO Rate	CC#019
LFO Waveform	CC#020
LFO Target	CC#021
LFO Depth	CC#022
LFO Sync ON/OFF	CC#081
LFO Keyboard Sync ON/OFF	CC#082

General Track Parameters:	Default Mapping
Channel: FX Send	CC#118
Channel: FX Input	CC#119
Shuffle ON/OFF	CC#010
Solo ON/OFF	CC#011
Mute ON/OFF	CC#012
Channel: Volume	CC#113
Channel: Panorama	CC#114

Channel Parametric EQ Parameters:	Default Mapping
Channel: Low EQ ON/OFF	-
Channel: Low EQ Shelf/Peak	-
Channel: Low EQ Frequency	-
Channel: Low EQ Q	-
Channel: Low EQ Gain	-
Channel: Mid EQ ON/OFF	-
Channel: Mid EQ Frequency	-
Channel: Mid EQ Q	-
Channel: Mid EQ Gain	-
Channel: High EQ ON/OFF	-
Channel: High EQ Shelf/Peak	-
Channel: High EQ Frequency	-
Channel: High EQ Q	-
Channel: High EQ Gain	-
Channel: EQ Out	-

20.7.4 VA-Beast MIDI CC Mapping Chart

LFO1 Parameters:	Default Mapping
LFO1 Rate	CC#019
LFO1 Waveform	CC#020
LFO1 Target	CC#021
LFO1 Depth	CC#022
LFO1 Sync ON/OFF	CC#081
LFO1 Keyboard Sync/Env	CC#082
LFO1 Invert ON/OFF	CC#084

LFO2 Parameters:	Default Mapping
LFO2 Rate	CC#023
LFO2 Waveform	CC#085
LFO2 Target	CC#024
LFO2 Depth	CC#025
LFO2 Sync ON/OFF	CC#086
LFO2 Keyboard Sync/Env	CC#087
LFO2 Invert ON/OFF	CC#089

LFO3 Parameters:	Default Mapping
LFO3 Rate	CC#045
LFO3 Waveform	CC#048
LFO3 Target	CC#049
LFO3 Depth	CC#051
LFO3 Sync ON/OFF	CC#053
LFO3 Keyboard Sync/Env	CC#057
LFO3 Invert ON/OFF	CC#058

Mod Env1 Parameters:	Default Mapping
Mod Env1 Attack	CC#026
Mod Env1 Attack Type (Lin/Exp/Offset)	CC#104
Mod Env1 Decay	CC#027
Mod Env1 Target	CC#028
Mod Env1 Depth	CC#029
Mod Env1 Invert ON/OFF	CC#108
Mod Env1 Mode (AD/AD Repeat/AHD)	CC#109

Mod Env2 Parameters:	Default Mapping
Mod Env2 Attack	CC#060
Mod Env2 Attack Type (Lin/Exp/Offset)	CC#061
Mod Env2 Decay	CC#077
Mod Env2 Target	CC#066
Mod Env2 Depth	CC#067
Mod Env2 Invert ON/OFF	CC#068
Mod Env2 Mode (AD/AD Repeat/AHD)	CC#069

Mod Env3 Parameters:	Default Mapping
Mod Env3 Attack	CC#090
Mod Env3 Attack Type (Lin/Exp/Offset)	CC#091
Mod Env3 Decay	CC#092
Mod Env3 Target	CC#093
Mod Env3 Depth	CC#094
Mod Env3 Invert ON/OFF	CC#095
Mod Env3 Mode (AD/AD Repeat/AHD)	CC#117

OSC1 Parameters:	Default Mapping
OSC1 Waveform	CC#030
OSC1 Sync/FM ON/OFF	CC#035
OSC1 Shape	CC#079
OSC1 FM Type (Phase/Log+/Log+-/Lin+/Lin+-)	CC#115

OSC2 Parameters	Default Mapping
OSC2 Waveform	CC#031
OSC2 Sync/FM ON/OFF	CC#103
OSC2 Shape	CC#102
OSC2 FM Type (Phase/Log+/Log+-/Lin+/Lin+-)	CC#116
OSC2 Tune (also Noise Freq, Tune1)	CC#078
OSC2 FineTune (also NoiseFilter Type, Tune2)	CC#033
OSC2 Tune Mode (Semi Tones/Partial No/KB Off Fixed)	CC#034

OSC Mod/Mix Parameters:	Default Mapping
OSC Mix 1/2	CC#008
OSC Mod Depth	CC#070
OSC Mod Type (FM/DFM/RM/DIST/FILT/DRM)	CC#105
OSC Mod Noise ON/OFF	CC#106
Octave Shift	CC#017

Filter 1 Parameters:	Default Mapping
Filter 1 Cutoff Frequency	CC#074
Filter 1 Resonance (also Bandwidth for BP/NP)	CC#042
Filter 1 Type (LP12/HP12/LP24/HP24/BP/NP/MoogLP/MoogHP)	CC#044
Filter 1 Keyboard Tracking ON/OFF	CC#046
Filter 1 Env Attack	CC#059
Filter 1 Env Attack Type (Lin/Exp/Offset)	CC#063
Filter 1 Env Decay	CC#039
Filter 1 Env Sustain	CC#040
Filter 1 Env Release	CC#041
Filter 1 Env Depth	CC#043
Filter 1 Env Invert ON/OFF	CC#062

Filter 2 Parameters:	Default Mapping
Filter 2 Cutoff Frequency	-
Filter 2 Resonance (also Bandwidth for BP/NP)	-
Filter 2 Type (LP12/HP12/LP24/HP24/BP/NP/MoogLP/MoogHP)	-
Filter 2 Keyboard Tracking ON/OFF	-
Filter 2 Routing Serial/Parallel	-
Filter 2 Env Attack	-
Filter 2 Env Attack Type (Lin/Exp/Offset)	-
Filter 2 Env Decay	-
Filter 2 Env Sustain	-
Filter 2 Env Release	-
Filter 2 Env Depth	-
Filter 2 Env Invert ON/OFF	-

Voice Mode Parameters:	Default Mapping
Vibrato ON/OFF	CC#056
Vibrato Rate	CC#054
Vibrato Depth	CC#055
Unison ON/OFF	CC#080
Unison Depth	CC#083
Unison Number of Voices	CC#088
Mono ON/OFF (Glide/Legato section)	CC#015
Glide Mode (OFF/ON/Auto Legato)	CC#065
Glide Rate	CC#005
Chord Memory	CC#112
Arpeggio ON/OFF	CC#047
Arpeggio Rate	CC#050
Arpeggio Sync ON/OFF	CC#052
Arpeggio Mode (Up/Down/UpDown/Random)	CC#110
Arpeggio Octaves (1/2/3/4)	CC#111

Amp/Output Parameters:	Default Mapping
Amp Env Attack	CC#073
Amp Env Attack Type (Lin/Exp)	CC#107
Amp Env Decay	CC#036
Amp Env Sustain	CC#037
Amp Env Release	CC#072
Amp Level	CC#071

General Track Parameters:	Default Mapping
Channel: FX Send	CC#118
Channel: FX Input	CC#119
Shuffle ON/OFF	CC#010
Solo ON/OFF	CC#011
Mute ON/OFF	CC#012
Channel: Volume	CC#113
Channel: Panorama	CC#114

Channel Parametric EQ Parameters:	Default Mapping
Channel: Low EQ ON/OFF	-
Channel: Low EQ Shelf/Peak	-
Channel: Low EQ Frequency	-
Channel: Low EQ Q	-
Channel: Low EQ Gain	-
Channel: Mid EQ ON/OFF	-
Channel: Mid EQ Frequency	-
Channel: Mid EQ Q	-
Channel: Mid EQ Gain	-
Channel: High EQ ON/OFF	-
Channel: High EQ Shelf/Peak	-
Channel: High EQ Frequency	-
Channel: High EQ Q	-
Channel: High EQ Gain	-
Channel: EQ Out	-

20.8 MIDI Export

MIDI Export describes the process of exporting a G-Stomper Sequence data as a MIDI (type-1) .mid file.

G-Stomper can export single Patterns as MIDI.
The following data will be included in the exported .mid files.

- **1 Tempo Track**
  Pattern Tempo + BPM automation (if any)

- **1 MIDI Track for all Drum Sampler Tracks together**
  All Triggers of all Drum Sampler Tracks, which have a MIDI Key assigned in the Global Key Mappings in the MIDI Setup. The Triggers in this MIDI Track are non-tonal, in other words every Drum Track has a fixed MIDI Note assigned.

- **N separate MIDI Tracks for each Drum Sampler Track**
  Tonal export for each Drum Track incl. Automations.

- **N separate MIDI Tracks for each VA-Beast Track**
  Tonal export for each VA-Beast Track incl. Automation.

Generally only Tracks with audible content are included in a MIDI Export. In other words, muted Tracks and Tracks without a main Sequence will be excluded.

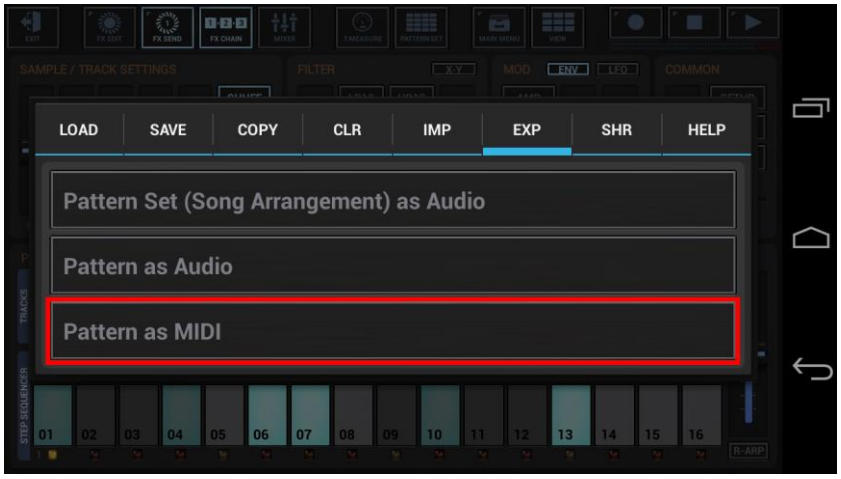
All exported MIDI Tracks are set to MIDI Channel 1.

Automations are only exported, if the automated parameter is mapped to a MIDI CC in the MIDI Setup.

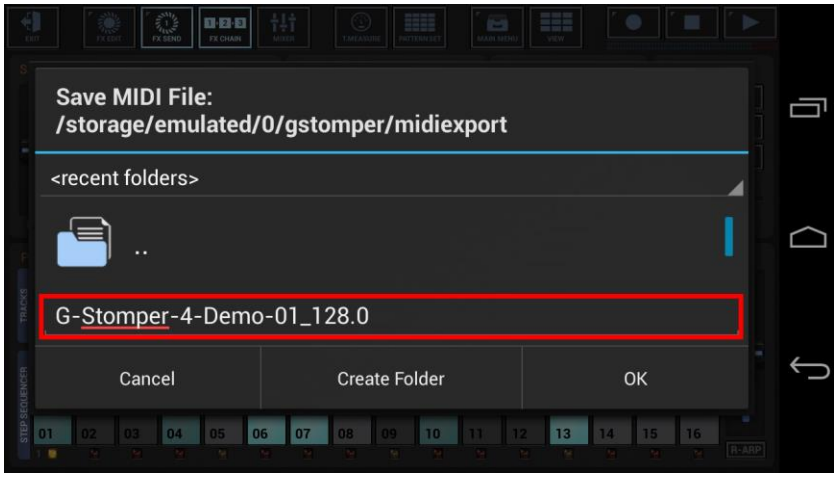
20.8.1 Export Pattern as MIDI

Open the Main Menu (on every screen).

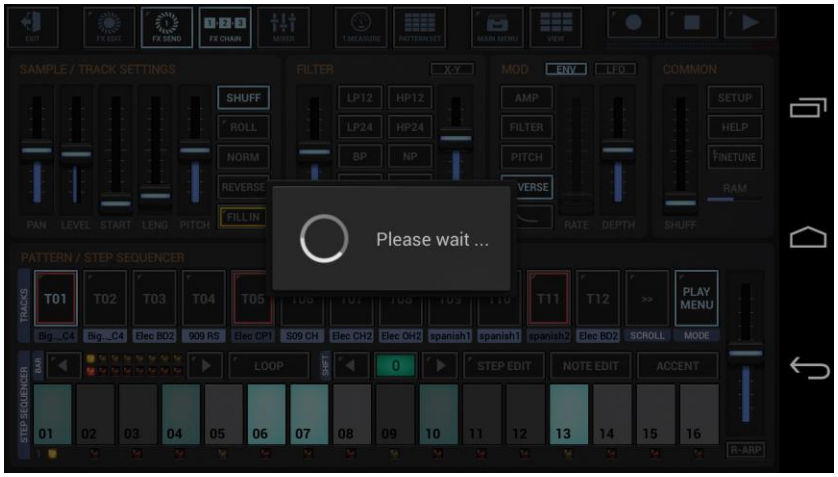
To export a single Pattern, select the EXP tab, and then choose "Pattern as MIDI".



Choose a name for the exported file.
(By default, the exported file is named like the exporting Pattern, with a Tempo/BPM suffix applied)



Finally, confirm with OK to start the export process.



The exported .mid file will be located in the folder ‘gstomper/midiexport‘ on your device storage.

Once exported, you can load the MIDI file into the MIDI sequencer of your choice.